SOLIDAL®

Solid Aluminium Cladding
Pre-finished. Pre-fabricated.

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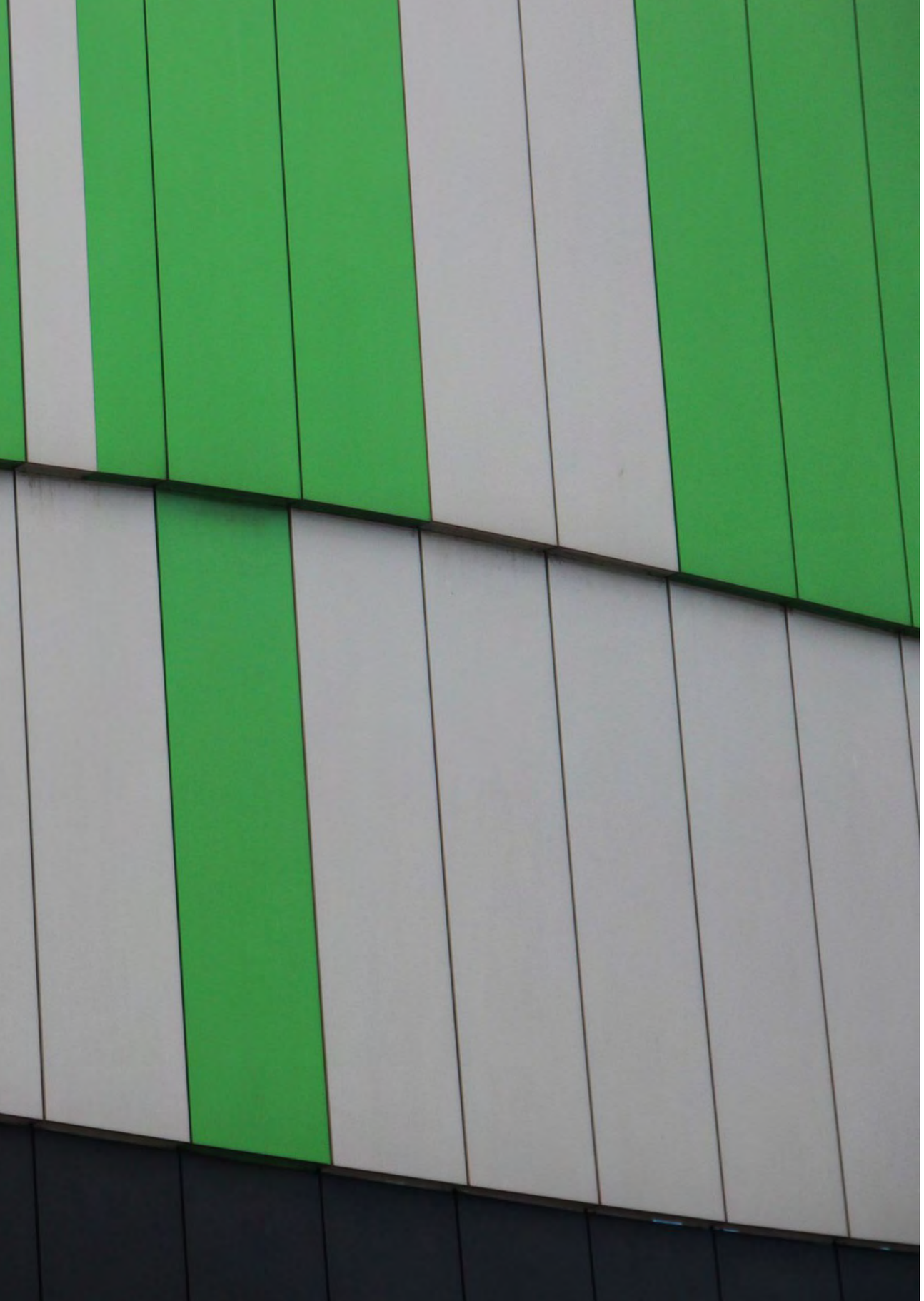


SOLIDAL®
Pre-finished Solid Aluminium

Natural beauty, outstanding durability

SOLIDAL® for all building applications.

Innovative production processes are key underlying strengths of the new pre-finished **SOLIDAL®** materials.

These processes start from understanding the architectural aesthetic demands, through to the practicality and ease of installation methods. **SOLIDAL®** has taken all into consideration, and proves to be the most durable, safe, façade material on the market.

green building council australia

SOLIDAL®
Technical Specifications

Conversion Coating: Preparation of SOLIDAL® before Paint application is completed in 100% chromate free baths.

Typical ways to prepare Solid aluminium before painting is using CHROMATE baths, chromate process is highly cancerous and deadly.

Base Metal Cleaning: Cleaning and passivation of metal is completed by submersing **SOLIDAL®** materials into tanks which have an ALODINE 5200 Solution for up to 5 minutes at a time. This is critical to ensure the base metal materials are fully cleaned prior to coating materials being applied.

Brand of Cleaning Product: ALODINE 5200 MU Solution.
Supplier HENKEL Germany

Cleaning and passivation of all **SOLIDAL®** is signed off by a P.P.G (PVDF) or AkzoNobel site engineer before coating is applied.

Please note: *Traditional chromate conversion has been reduced due to heavy metal pollution.*

	SOLIDAL®	
Panel Thickness (mm)	2mm, 2.5mm, 3mm, 4mm up to 6mm	
Available width (mm)	1240mm, 1500mm, 2000mm	
Length (mm)	7000mm	
	SOLIDAL® DIMPLE & PERFORATED	
Panel Thickness (mm)	3mm, 4mm, 5mm	
Dimpled Percentage	10%, 20%, 40%	
Diameter Options (mm)	15mm, 30mm, 60mm, 120mm, up to 300mm	
Depth of Dimple (mm)	2.5mm (Standard)	
	SOLIDAL® Physical Properties	
	* 3000 Series **SOLIDAL®**	** 5000 Series **SOLIDAL®**
Mechanical Properties		
Brinell Hardness	45	67
Elastic Modulus	70GPa	68GPa 9.9 x 106 psi
Elongation at Break	6.0%	8.0%
Fatigue Strength	68 MPa	110 MPa 15 x 103 psi
Poisson's Ratio	0.33	0.33
Shear Modulus	26 GPa	26 GPa 3.7 x 106 psi
Shear Strength	93 MPa	150 MPa 22 x 103 psi
Tensile Strength: Ultimate	160 MPa	250 MPa 37 x 103 psi
Tensile Strength: Yield (Proof)	125 MPa	190 MPa 28 x 103 psi
Thermal Properties		
Melting Onset (Solidus)	640 °C 1120 °F	610 ºC 1120 ºF
Specific Heat Capacity	900 J/kg-K 0.22 BTU/lb-°F	900 J/kg-K 0.22 BTU/lb-ºF
Thermal Conductivity	180 W/m-K 100 BTU/h-ft-°F	140 W/m-K 80 BTU/h-ft-ºF
Thermal Expansion	23µm/m-K	24µm/m-K
Electrical Properties		
Electrical Conductivity: Equal Volume	44% IACS	35% IACS
Electrical Conductivity: Equal Weight (Specific)	140%	120%

* 3000 Series **SOLIDAL®** is ideal for Kynar® 500 PVDF and Powder coat application

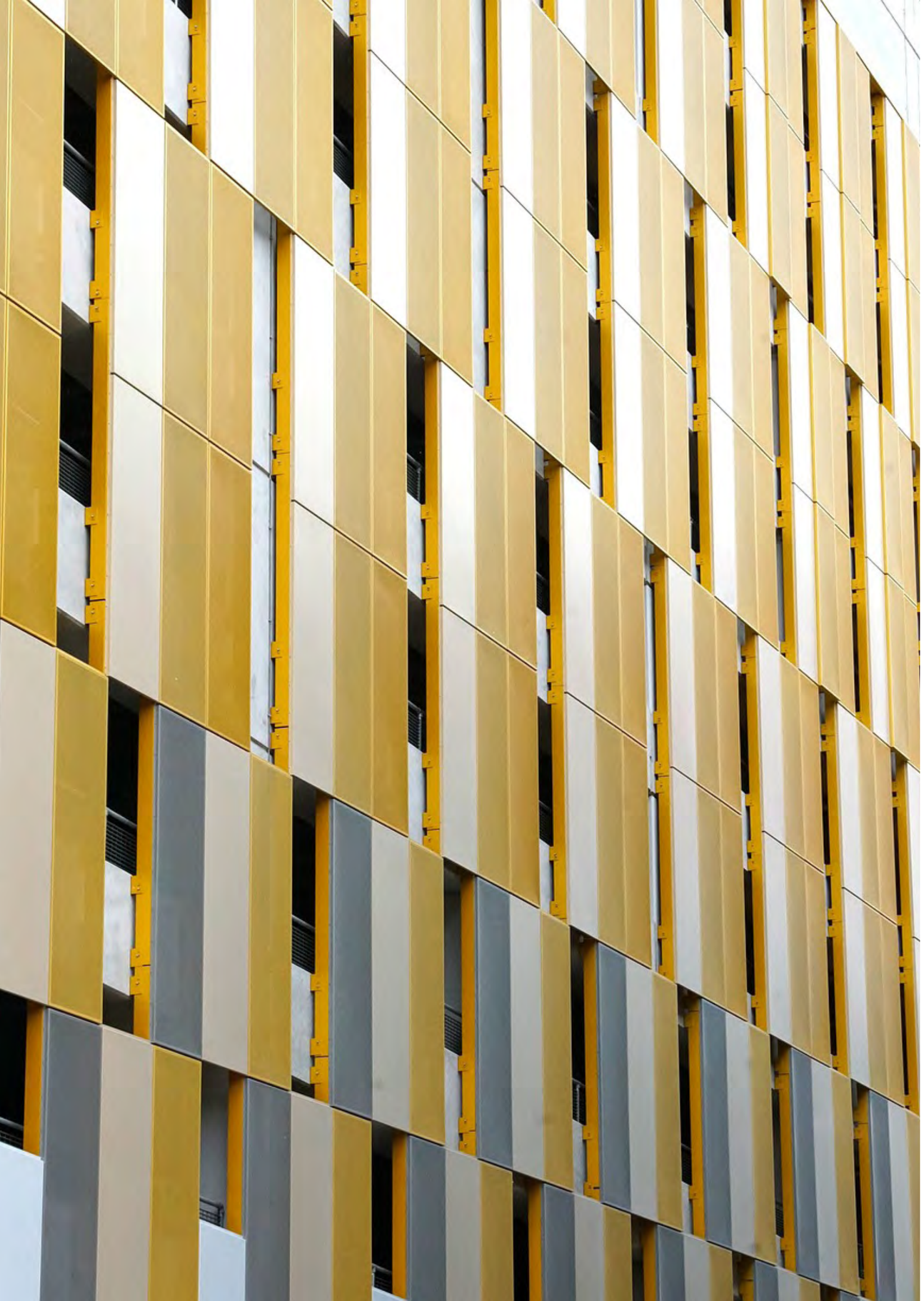
** 5000 Series **SOLIDAL®** is ideal for Anodise application

SOLIDAL®
Safety & Sustainability

Pre-finished **SOLIDAL®** undergo rigorous testing to ensure maximum Building Safety.

SOLIDAL® is the ideal product for areas which require maximum fire safety.

Classified as non-combustible, non-flammable materials, pre-finished **SOLIDAL®** provides peace of mind for all Architectural pre-finished metal cladding applications.



SOLIDAL®

15 Year
Performance
Warranty

Key features and advantages of **SOLIDAL®** KYNAR 500® COIL COATED PVDF

Modern times have seen the rise of metal as a prime exterior material, largely due to its rugged durability, design versatility, and aesthetic possibilities.

For all its bravado and beauty, metal tends to be superficially weak and is generally available in but a single color. Thus, in order to be both functional and pleasing to the eye, metal must be coated with a unique finish which beautifies with color and resists any chalking, pitting, chipping, or premature aging.

Noted by architects around the world, Kynar 500® PVDF resin-based coatings are precisely the product necessary to provide such protection to **SOLIDAL®** Solid Aluminium.

No other coating system withstands the rigors of nature and time like those based on Kynar 500® resins. This high-performance fluoropolymer resin, with its extraordinary capability to retain color and gloss, keeps **SOLIDAL®** material looking vibrant and appealing.

PPG Architectural Coatings

KYNAR by ARKEMA

SOLIDAL®

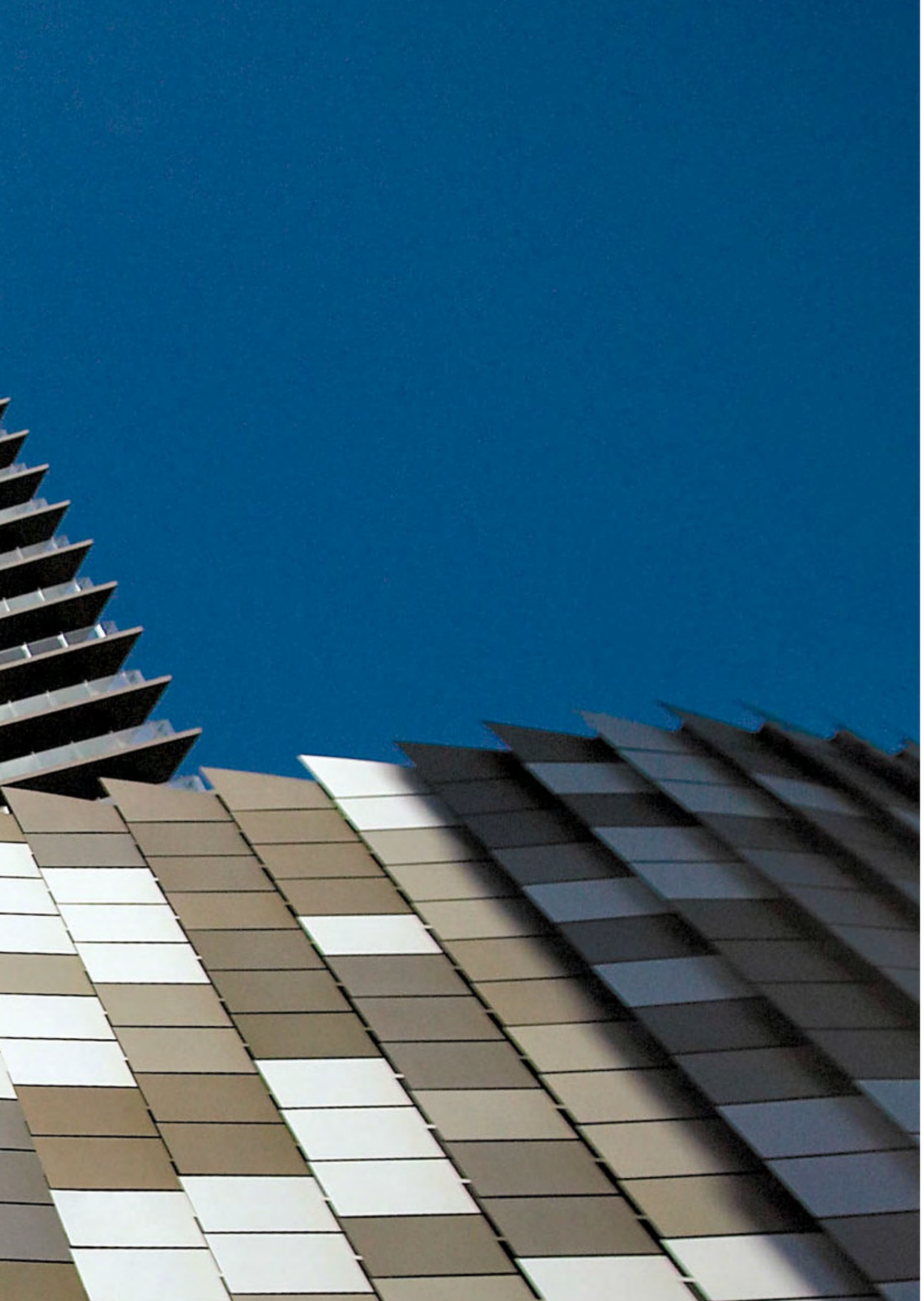
SOLIDAL® POWDERCOATED

Ultra Durable Architectural Powder Coating

Providing ultra protection from the elements the range exceeds global weathering standard **AAMA2604-13**, guaranteeing excellent color retention and high resistance to chalking. Exceptional endurance to environmental stressors including high levels of UV radiation, humidity, heavy pollutants and extreme temperatures are achieved through ultra durable polymer technology engineered to withstand the weathering extremes of Australia and New Zealand.

> Available in a wide range of finishes and gloss levels
> Ultra durable performance for all exterior and interior architectural projects
> Meets global architectural specification AAMA2604-13
> Guaranteed up to 20 Years Gold Global Warranty

AkzoNobel



30 Year
Performance
Warranty

SOLIDAL® Anodise

Natural beauty, outstanding durability

Specific process parameters of real metal anodising and sustainability of the environment are key underlying strengths of the new Nu-core® **SOLIDAL®** façade solution.
The AAF Evershield Coastal Anodise finish offers outstanding durability, over a 100 Year Life Cycle, making the **SOLIDAL®** façade solution, both Non Combustible and 100% recyclable.

With the Addition of the Illustro series, the Evershield Range has now broadened into 3 lustres.

Matt: The traditional Matt series combining a timeless and natural matt lustre.

Illustro: The exclusive new Evershield Illustro series is cleverly designed to subtly reflect with the changing light conditions throughout the day creating a fusion with natural building elements and rendered finishes.

Bright: The Bright series is just brilliant. A classic polished metal finish that stands the test of time.

AAF

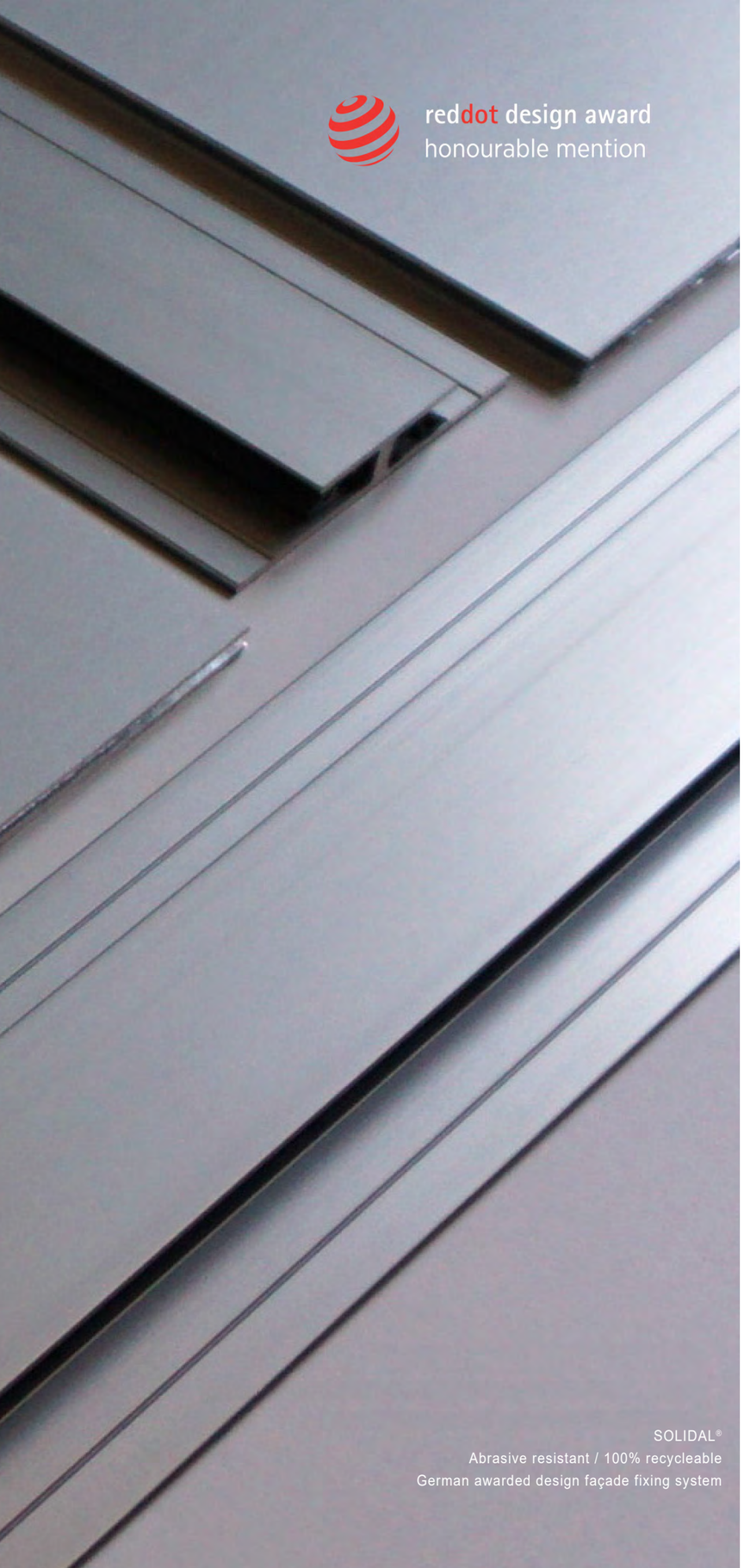
EVERSHIELD®
HIGH GRADE ANODISING

5052H24 **SOLIDAL®**
Top Bright® Mirror (High Reflective)

Anodising: Optional 5052 AP1 AAMG or 5005H14 SOLIDAL®
Anodise thicknesses of at least 10µm for indoor and 20/25µm for outdoor applications are recommended, depending on exposure.
Detailed requirements for each application should be discussed with the customer before the anodizing specification is finalised. Anodizing carried out by one firm to ensure batch uniformity. As is usual practice, we recommend limiting samples are agreed to define acceptable process-related variations in gloss and colour.

Watermark® offers a range of Reflective and Structural Surfaces:

> Top Bright® Mirror
> Satin
> Bead Blasted
> Brushed



SOLIDAL®
Fabrication

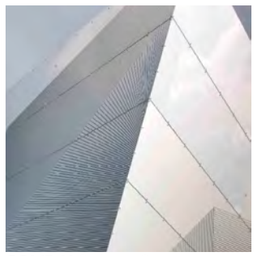
Watermark® offers an extensive range of **SOLIDAL®** pre-fabricated options allowing easier and more accurate on-site installation, as well as innovative surface treatments, dimpling and perforations.

SOLIDAL® Fixing Options:

SOLIDAL® Cassette

SOLIDAL® Smartfix®

SOLIDAL® Curtain Wall

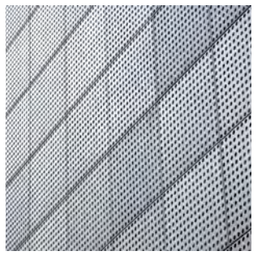

SOLIDAL® VIZFix®

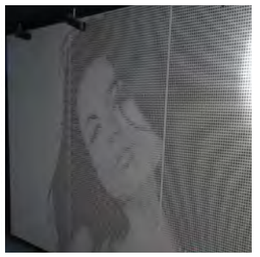
SOLIDAL® Fabrication Options:

Curving/Folding

PRE-EDGE SLOT
for Smartfix® System

SOLIDAL® Dimple


SOLIDAL® Perforated


SOLIDAL® Artwork

SOLIDAL® Fabrication

A large variety of designs can be achieved with SOLIDAL® pre-fabrication:

- SOLIDAL® Cassette modules - a cost effective solution that is pre-fabricated in a factory environment according to clients requirements. Calculations are completed on a project by project basis, so the SOLIDAL® Cassette modules are not over or under engineered for the required application.
- Pre-edge Slot on SOLIDAL® panels makes Installation easy with Smartfix® System.
- SOLIDAL® panels to be curved under specified angles, bent with sharper of rounder edges leaving panel surface smooth and Finish undamaged.
- SOLIDAL® Dimple and Perdorated Options including customised options and artwork

SOLIDAL® Quality Control

Only after Product Dimensions, Surface Colour and Quantities are confirmed, protective film is placed on panels and order is palletised.
Final packaging is inspected.
Delivered directly to site ready for installation or to clients factory for inspection prior to the install process.

Each item is numbered and On-site Installation made easy with SOLIDAL® Panel Coding System.

SOLIDAL® ERP

All **SOLIDAL®** orders will have ERP tracking.
ERP tracking assists in the tracking all panel order schedules.

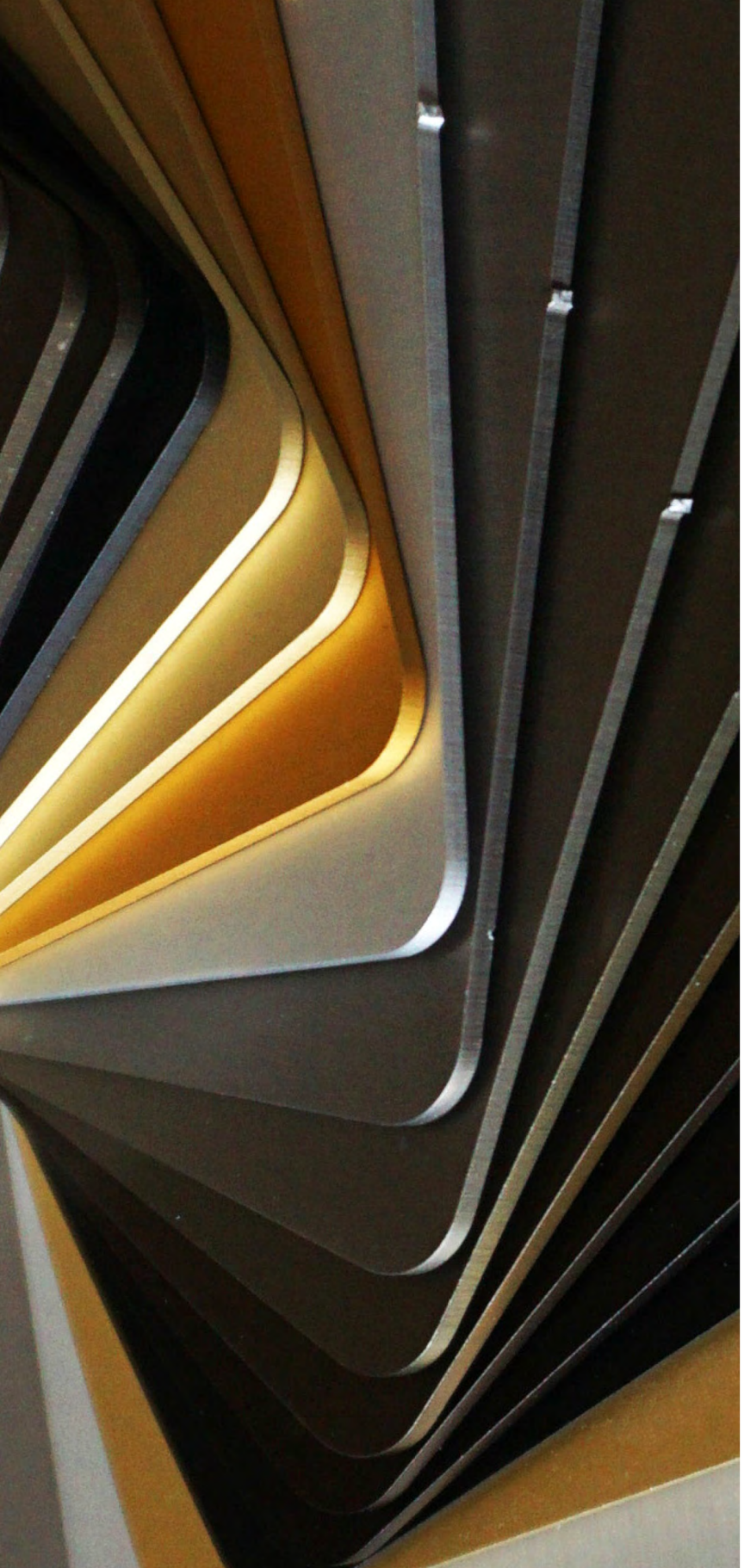
Assisting both customer and **SOLIDAL®** factory for tracking and monitoring quality production for complicated and non complicated façade installations.

SOLIDAL® Specialised Packaging Solutions

SOLIDAL® have contracted the same packaging solutions for provider as I.B.M and Hewllet Packard computers. Ensuring safe delivery of materials. **SOLIDAL®** Bright P Packaging is the most tried and resilient available, withstanding pressures up to 15 tonnes for a 12mm case.

- Provides excellent product protection
- Collapsible returnable pacakaing System
- Ideal for returnable / on-forwarding / reusing
- Stacking up to ten high when loaded Vibration
- Drop tested
- Weather resistance
- Impact and pressure tested

Having a collapsible returnable/forwarding packaging system allows for numerous savings through handling, transport and storing. When comparing returnable plywood packaging solutions to alternative materials such as steel or plastic one must consider; environmental impact, capital investment needed, total cost of system including transport/storage/repairs, ergonomics and safety for workers, and much more.



SOLIDAL®

SOLIDAL® Kynar® 500®
UNLIMITED CHOICE OF COLOURS

SOLIDAL® offers unlimited range of Finishes and Colours with various Gloss levels.

Kynar® 500 Solid is standard three coat system, consisting of a primer, topcoat and clear coat with a minimum thickness of 28 microns.
Reverse side can either be a milled aluminium finish or a polyester base coat finish.
Nano PVDF application is available. Maximum gloss level for Kynar® 500 finishes is 30%.

SOLIDAL® Kynar® 500® can match any RAL Colour Code

Utilise RAL sample color cards and follow the specification process below:
STEP 1: Choose your colour RAL chart code (for example RAL2009)
STEP 2: Specify RAL2009 (PC)[1] / NU2009 (PVDF)[2]

[1] Specify PC for Powder Coat
[2] Specify PVDF for Kynar® Coating

Colour Matching: provide us with a colour control sample for colour matching using our colour spectrometer.

HOW TO SPECIFY:

Once you have chosen **SOLIDAL®** Architectural Coating, it's important to specify the correct product.
We make specifying our **SOLIDAL®** products and coatings easy, simply:

1. Nominate your preferred Colour or Finish:
   Step 1. Nominate finish type:
   PVDF (Kynar® 500®) or
   Powder Coat (Interpon D2015) Ultriva or
   Anodise (from 10µm to 25µm Anodise)

   Step 2. Nominate the Colour, Finish and Product Code,
   e.g. Charcoal Pearl Matt YY237A (refer to SOLIDAL® colours & finishes catalogue)

2. Nominate the SOLIDAL® Architectural Grade of Aluminium: 3 Series or 5 Series*
   (this will be dependent on your preferred colour or finish)

3. Nominate the Fabrication / Fixing System (refer to **SOLIDAL®** Fabrication catalogue):
   Smartfix® System /
   Cassette Fixing /
   VIZFix System /
   Curtain Wall
   Perforated / Dimpled

Please contact our Customer Care Team for additional specification support and advice.
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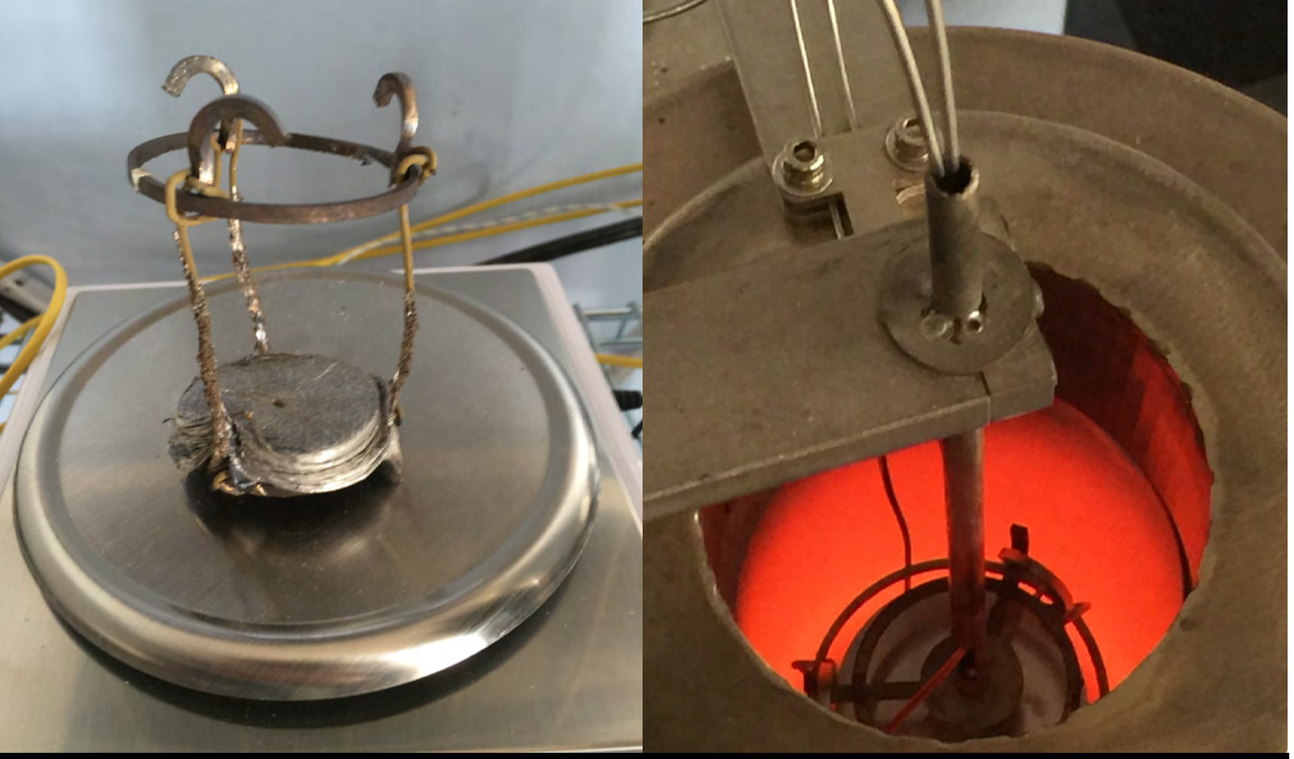

SOLIDAL® AS1530.1 TESTING
SOLIDAL® is rigorously tested to ensure maximum Building Safety.

Early grade composite materials are considered highly fire hazardous materials,
and have attributed to numerous building fires across the globe.

SOLIDAL®

Project **RECLAD®**

Project RECLAD® has been established to help provide, building owners, architects, engineers, **safe sustainable** solutions once these high risk buildings have been identified for re-cladding.

In conjunction with the leading façade engineering firms, **SOLIDAL®** provides an umbrella consultancy service that considers all factors, according to safety, budget and aesthetic.
Full transparency at all stages provided.

Contact us regarding your project requirement and a **SOLIDAL®** consultant will reply shortly.
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SOLIDAL®

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Intertek

smartfix®

reddot design award

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